

# ABSTRACT OF THE DISCLOSURE

Methods and apparatus, including computer program products, for blending in the presence of different transparencies. In one aspect, the invention provides a computer implemented method for blending a first graphic element and a second graphic element in accordance with a transfer mode  $T$ , the first graphic element having a color  $A$  and an alpha  $a$ , the second graphic element having a color  $B$  and an alpha  $b$ . The method includes: calculating a resulting alpha as  $\text{lerp}(a, b, q)$ ,  $\text{lerp}$  being a linear interpolation function and  $q$  being a pseudo-opacity that varies between 1 and 0, inclusive; calculating a blended color as  $T(A, B, q)$ ; calculating an intermediate color as  $\text{interpolate\_color}(A, \text{blended color}, \min(b/\text{resulting alpha}, 1))$ ,  $\text{interpolate\_color}$  being a continuous function that interpolates its input colors and  $\min$  being a function that selects the smaller of its input values; and calculating a result color as  $\text{interpolate\_color}(B, \text{intermediate color}, \min(a/\text{resulting alpha}, 1))$ .

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